

## San Antonio River Authority

### San Antonio River Water Quality Monitoring Network

The San Antonio River Authority shall, depending on availability of SEP funds, install additional water quality monitoring sites to complement and enhance the existing San Antonio River Basin Monitoring Network (SARBMN) along the San Antonio River in Bexar, Wilson, Karnes, and Goliad counties. The San Antonio River Authority may also use SEP funds to pay for the continued operation and maintenance of existing SARBMN sites. The network is expected to document the effects of accidental spills and pollution events that affect the river as well as nonpoint source pollution. The San Antonio River Authority may employ a contractor to install and provide ongoing operation and maintenance of the monitoring sites, validate data, analyze data, and provide documentation of water quality. The San Antonio River Authority shall compile data in a database for public information and make it available at [www.texaswaterdata.org](http://www.texaswaterdata.org) and possibly other URLs. The information collected will be used to monitor the water quality within San Antonio River area waters with real time or near real time monitoring data. SEP funds will be used to pay for the instrumentation, installation, and maintenance and/or operation of the instrumentation, data validation, software license, and telemetry costs.

Depending upon the site-specific data need(s) (coordinated with TCEQ), individual sites may monitor various water quality parameters such as dissolved oxygen, pH, specific conductance, temperature, turbidity, water level and stream flow. As technology and funding become available, the sites may be expanded to monitor additional parameters such as blue-green algae, chlorophyll, bacteria, and nutrients including ammonia, nitrates, and phosphates.

- A. Instrumentation: Each site may be comprised of any combination of the following water quality monitoring, communications, and support equipment: in-situ flow monitor; automated sampler; submersible pump and associated sample collection equipment; self-priming pump and associated sample collection equipment; multi-parameter sonde unit(s) and associated cables; data logger; modem(s); signal router(s); signal splitter(s); power supply (primary and backup); desktop computer(s); station trailer and/or traffic control box. If a site is expanded to include advanced parameters such as nutrients, a wet chemistry auto-analyzer plus calibration standards and reagents may be added.
- B. Operation and maintenance: The San Antonio River Authority may employ a contractor to install, operate, manage, validate, and perform other work on the project as needed. All operation and maintenance will be conducted consistent with established standard operating procedures approved by TCEQ prior to implementation. The San Antonio River Authority shall submit a scope of work plan, including proposed cost estimates, to TCEQ and shall not begin work on any SEP-related portion of this project without prior approval by the TCEQ SEP Coordinator.
- C. Data Management: Monitoring sites are intended for continuous non-regulatory water quality monitoring. The San Antonio River Authority shall bring data obtained from the monitors directly into the TCEQ Leading Environmental Analysis and Display System (LEADS) IPS MeteoStar database using hard-wired modems, wireless modems, or Geostationary Operational Environmental Satellites (GOES) modems, as the case may require, and the data will be made available to the public via the TCEQ Website ([www.texaswaterdata.org](http://www.texaswaterdata.org)) as soon as possible upon availability. This requires the San Antonio River Authority to prepare and submit a TCEQ Site Initiation Form for each monitor. The San Antonio River Authority shall also provide contact information for inclusion on the TCEQ Web site so that it may answer

questions in a timely manner (during normal business hours) regarding data and data quality from the measurement obtained from monitoring sites.

- D. Quality Assurance/Quality Control: the San Antonio River Authority shall conduct all monitoring paid for with SEP Funds under a TCEQ-approved Quality Assurance Project Plan. The San Antonio River Authority shall ensure that analysis of all data collected complies with state law and rules regarding use of certified or accredited testing laboratories (e.g. 30 Texas Administrative Code, Chapter 25, relating to Environmental Testing Laboratory Accreditation and Certification, as amended).

**Environmental Benefits:**

The San Antonio River passes through highly urbanized areas and agricultural areas that contribute stormwater and pollutants. The San Antonio River Water Quality Monitoring Network will provide a discernible environmental benefit to the San Antonio River by availing more frequent and more in-depth ongoing information about the river's water quality, ecosystem health, and instream flows, and will provide an early detection system for potential pollution sources. Identifying pollution sources will assist government entities in addressing negative impacts to sources of recreational and drinking water.

The data may be used to plan water treatment operation changes and may create a near real-time pollutant load model for point and non-point loads in base flow and stormwater flow conditions. The network may be expanded to include parameters for different types of usage, including recreation, fish and wildlife habitat, drinking water, flood alerts, and water rights, among others.

**Eligible Areas and Counties:**

This project may receive contributions from the following:

San Antonio River Basin; Carrizo-Wilcox and Gulf Coast Aquifers; and Bexar, Goliad, Karnes and Wilson Counties.

**Minimum Contribution:**

An initial contribution of \$22,000 is requested. Smaller contributions will be accepted after program implementation.